Ellsworth WWTF Public Noticed Permit Fact Sheet

General Information

Permit Number:	WI-0021253-10-0
Permittee:	Village of Ellsworth, 130 N Chestnut Street, Ellsworth, WI 54011
Discharge Location:	Ellsworth Wastewater Treatment Facility, Utility St., Ellsworth, WI 54011 NE ¼ of the NE ¼ of Section 20, T26N, R17W, Town of Ellsworth, Pierce County, WI
Receiving Water:	Isabelle Creek in the Trimbelle and Isabelle Creek Watershed of the Lower Chippewa River Basin in Pierce County.
StreamFlow ($Q_{7,10}$):	0 cfs
Stream Classification:	Isabelle Creek is considered a disappearing stream (seeps to groundwater) at the discharge point
Annual Average Design Flow	0.358 MGD
Significant Industrial Loading?	None
Operator at Proper Grade?	Yes, except for SS which the permittee has 5 years to obtaine from the start of the permit term
Approved Pretreatment Program?	N/A

Facility Description

The Ellsworth Wastewater Treatment Facility processes domestic wastewater generated within the Village of Ellsworth. The facility has an annual average design flow of 0.358 million gallons per day (MGD), and an actual annual average of 0.274 MGD in 2021. Preliminary treatment includes raw wastewater screening. Secondary treatment is achieved through an anaerobic selector tank for biological phosphorus removal, an activated sludge oxidation ditch designed to nitrify and denitrify, and alum can be used for phosphorus polishing prior to solids removal with final clarifiers. Disinfection is performed with ultraviolet radiation prior to discharge. Liquid sludge is stored onsite and is hauled to the West Central Wisconsin Biosolids Facility (WCWBF) for processing and disposal. No significant operational changes occurred during the last permit term or are proposed in the upcoming permit term. Significant effluent monitoring and/or limit changes are as follows: 1) the conditional approval of a multi-discharger variance (MDV) for phosphorus and the imposition of a lower monthly average interim phosphorus limit along with associated compliance schedules to comply with s. 283.16, Wis. Stats. requirements for phosphorus, 2) ammonia limits have been reduced, and 3) the chloride limits have increased. The sample frequency for both influent and effluent flow have been changed from “continuous” to “daily” for eDMR reporting purposes. Additional compliance schedules have been added to the permit that require the permittee as follows: 1) inspect the effluent waterway quarterly for sinkholes, and 2) implement chloride source reduction measures.

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)**
701	0.274 MGD (2021)	Representative domestic influent samples shall be collected from the influent channel between the fine screen in the headworks room and selector tank.
001	0.248 MGD (2021)	Representative effluent composite samples shall be collected in the effluent channel before ultraviolet disinfection. Grab samples shall be collected in the effluent channel after disinfection.
002	62.5 dry US tons (per the permittee on their reissuance application)	As long as sludge is shipped to the West Central Wisconsin Biosolids Facility (WCWBF) for disposal, representative sludge samples shall be collected once per year and monitored for List 1. Sludge samples shall be collected prior to hauling and test results shall be reported on Form 3400-49 "Waste Characteristics Report". Hauled sludge reports shall be submitted on Form 3400-52 "Other Methods of Disposal or Distribution Report" following each year that sludge is hauled.

1 Influent - Proposed Monitoring

Sample Point Number: 701- INFLUENT PLANT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD5, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	3/Week	24-Hr Flow Prop Comp	

Changes from Previous Permit:

The sample frequency for flow has been changed from “continuous” to “daily” for eDMR reporting purposes.

Explanation of Limits and Monitoring Requirements

Influent monitoring is needed to assess loading to facility and treatment plant performance. Influent monitoring requirements are in accordance with NR 206.09(2).

2 Surface Water - Proposed Monitoring and Limitations

Sample Point Number: 001- EFFLUENT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD5, Total	Monthly Avg	20 mg/L	3/Week	24-Hr Flow Prop Comp	
BOD5, Total	Weekly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	20 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Daily	Grab	
pH Field	Daily Min	6.0 su	Daily	Grab	
Dissolved Oxygen	Daily Min	4.0 mg/L	3/Week	Grab	
Nitrogen, Ammonia (NH3-N) Total	Daily Max	See Below	3/Week	24-Hr Flow Prop Comp	See ammonia section below for specifics on daily max, weekly average and monthly average limits.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	See Below	3/Week	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	See Below	3/Week	24-Hr Flow Prop Comp	
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	Weekly	Grab	Limit applies year-round
Chloride	Monthly Avg	400 mg/L	4/Month	24-Hr Flow Prop Comp	Samples for chloride shall be collected on four consecutive days each month. See section below on "alternate wet weather limit".
Chloride	Weekly Avg	400 mg/L	4/Month	24-Hr Flow Prop Comp	
Chloride	Weekly Avg - Variable	lbs/day	4/Month	Calculated	
Chloride, Variable Limit		lbs/day	4/Month	Calculated	
Nitrogen, Nitrite + Nitrate Total		mg/L	Weekly	24-Hr Flow Prop Comp	
Nitrogen, Total Kjeldahl		mg/L	Weekly	24-Hr Flow Prop Comp	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Total	Monthly Avg	10 mg/L	Weekly	Calculated	
Phosphorus, Total	Monthly Avg	0.9 mg/L	3/Week	24-Hr Flow Prop Comp	This is an interim limit effective through 03/31/2024. See the MDV/Phosphorus subsections and phosphorus schedules.
Phosphorus, Total	Monthly Avg	0.8 mg/L	3/Week	24-Hr Flow Prop Comp	This is an interim MDV limit effective 04/01/2024. See the MDV/Phosphorus subsections and phosphorus compliance schedules.
Phosphorus, Total		lbs/month	Monthly	Calculated	Report the total monthly phosphorus discharged in lbs/month on the last day of the month on the DMR. See Standard Requirements for 'Appropriate Formulas' to calculate the Total Monthly Discharge in lbs/month.
Phosphorus, Total		lbs/yr	Annual	Calculated	Report the sum of the total monthly discharges for the calendar year on the Annual report form.

Changes from Previous Permit

The effluent monitoring frequency for all parameters were considered. The frequency for dissolved oxygen and ammonia nitrogen were increased from daily to 3/week. The frequency for chloride was changed from weekly to 4/month on consecutive days each month. Monitoring frequencies are based on the size and type of the facility and are established to best characterize effluent quality and variability, to detect events of noncompliance, and to ensure fairness and consistency in permits issued across the state. Requirements in administrative code (NR 108, 205, 210 and 214 Wis. Adm. Code) and Section 283.55, Wis. Stats. were considered, where applicable, when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term. The department has determined at this time that the aforementioned changes in monitoring frequency are warranted based on the size and type of the facility. For more information see the March 22, 2021 version of the Bureau of Water Quality Program Guidance Document “Monitoring Frequencies for Individual Wastewater Permits”.

Other significant changes are as follows: 1) the conditional approval of a multi-discharger variance (MDV) for phosphorus and the imposition of a lower monthly average interim phosphorus limit along with associated compliance schedules to comply with s. 283.16, Wis. Stats. requirements for phosphorus, 2) ammonia limits have been reduced, 3) the chloride limits have increased, and 4) the sample frequency for flow has been changed from “continuous” to “daily” for eDMR reporting purposes.

For more information on these changes see the limits memo referenced below and additional info. provided below.

Explanation of Limits and Monitoring Requirements

Limits were determined for the Village of Ellsworth's existing discharge to Isabelle Creek using chs. NR 102, 104, 105, 106, 207, 210, 212 and 217 of the Wisconsin Administrative Code (where applicable). For more information see the October 22, 2021 memo from Benjamin Hartenbower to Holly Heldstab titled "Water Quality-Based Effluent Limitations for the Ellsworth Wastewater Treatment Facility WPDES Permit No. WI-0021253".

BOD5, TOTAL SUSPENDED SOLIDS (TSS), DO, pH, FECAL COLIFORM and TOTAL NITROGEN –No changes were made to the permit limitations for BOD5, TSS, DO, pH, fecal coliform or total nitrogen. Because the reference effluent flow rates and receiving water characteristics have not changed, limitations do not need to be re-evaluated at this time.

AMMONIA - Current acute and chronic ammonia toxicity criteria for the protection of aquatic life are included in Tables 2C and 4B of ch. NR 105, Wis. Adm. Code. Subchapter IV of ch. NR 106 establishes the procedure for calculating water quality based effluent limitations (WQBELs) for ammonia. There has been a change in expression of limits per the 2016 revisions to NR 205.065. In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as weekly average and monthly average limits whenever practicable. Whenever a daily maximum limitation is determined necessary to protect water quality, a weekly and monthly average limitation shall also be included in the permit and set equal to the daily maximum limit unless a more restrictive limit is already determined necessary to protect water quality.

The ammonia monitoring frequency has been increased from weekly to 3/week in order to better determine compliance**.**

Below is a summary of limits for Nitrogen, Ammonia (NH_3-N) that vary seasonally.

Month	Daily Maximum Limit (mg/L)	Weekly Average Limit (mg/L)	Monthly Average Limit (mg/L)
January	6.8	6.8	6.1
February	6.8	6.8	6.1
March	6.8	6.8	6.1
April	7.6	7.6	6.1
May	8.4	8.1	3.2
June	8.4	8.1	3.2
July	8.4	8.1	3.2
August	8.4	8.1	3.2
September	8.4	8.1	3.2
October	6.8	6.8	6.8
November	6.8	6.8	6.8
December	6.8	6.8	6.8

PHOSPHORUS – Phosphorus rules became effective December 1, 2010 per NR 217, Wis. Adm. Code, that required the permittee to comply with water quality based effluent limits (WQBELs) for total phosphorous. The final phosphorus WQBELs are 0.225 (monthly average) & 0.075 mg/L and 0.22 lbs/day (6-month averages) and were to become effective as scheduled unless a variance was granted. For this permit term, the permittee has applied for the Multi-Discharger Variance (MDV) for phosphorus as provided for in s. 283.16, Wis. Stats., and approved by USEPA on February 6, 2017 until February 5, 2027. The permittee qualifies for the MDV because it is an existing source and a major facility upgrade is needed to comply with the applicable phosphorus WQBELs, thereby creating a financial burden. The interim MDV effluent limit for total phosphorus is 0.8 mg/L as a monthly average limit. The limit was derived using DMR data from January 2017 to July 2021. As the facility cannot currently meet this limitation, the monthly average limit of 0.9 mg/L will be effective until the 0.8 mg/L becomes effective on 04/01/2024.

Conditions of the MDV require the permittee to optimize phosphorus removal throughout the proposed permit term, comply with interim limits and implement the approved plan that is designed to result in annual reductions from other sources in the basin based on the pounds of phosphorus discharged during the previous year in excess of the specified target value. The approved MDV Watershed plan MDV-2021-0001 proposes streambank stabilization that meets offset requirements in s. 283-16(6)(b)3 Wis. Stats.

For additional information see the following documents:

- The "Phosphorus Multi-discharger Variance Application for Municipal Facilities" submitted by the permittee, dated 12/31/2020.
- The 06/02/2021 "Multi-discharger Variance Evaluation Checklist" completed by the department
- The 12/03/2021 letter from the DNR granting "Conditional Approval of the Multi-discharger Phosphorus Variance"
- The May 2021 "MDV Watershed Plan, Ellsworth, WI", assigned the DNR tracking number MDV-2021-0001.

CHLORIDE: Isabelle Creek, the receiving water, flow over karst bedrock that is known to develop dissolution sink holes that can create a conduit to the groundwater. If this were to occur, the effluent from the WWTF has a potential to degrade groundwater. During this permit term, instead of imposing a lower chloride effluent limit, the permittee is required to inspect the waterway quarterly to ensure that no sink holes have developed in the creek path. See the Schedules schedule for more information on the water inspection requirements.

Acute and chronic chloride toxicity criteria for the protection of aquatic life are included in Tables 1 and 5 of ch. NR 105, Wis. Adm. Code. Subchapter VII of ch. NR 106 establishes the procedure for calculating water quality based effluent limitations (WQBELs) for chloride. Based on a comparison of the effluent data from January 2017 to July 2021 and the calculated effluent limitations, a water quality based chloride effluent limits are included in the permit per s. NR 106.05(4)(b), Wis. Adm. Code. In addition to the concentration limits in the table above, chloride mass limits are also included based on weather conditions. The applicable non-wet weather mass limit is 1,194 pounds/day. The applicable wet weather mass limit is 2,632 pounds/day. The monitoring frequency has changed from weekly to 4/month on consecutive days each month in order to better capture representative data.

Even though the lower limit in the last permit term was included to protect groundwater quality and not surface water quality, because the weekly average chloride limit is being increased from 325 mg/L to 400 mg/L, antidegradation and antibacksliding evaluations are required per NR 207 Wis. Adm. Code.

The water quality based weekly average chloride limit of 400 mg/L was calculated with no assimilative capacity, using a 7Q10 of 0 cfs. As the 4-day P99 of 404 mg/L represents the currently achievable weekly average, increasing the discharge limit from 325 mg/L to 400 mg/L will not lower surface water quality from current conditions. Therefore, the comparison between the expected levels of chloride and levels at one-third assimilative capacity does not result in a significant lowering of water quality as defined in s. NR 207.05(4), Wis. Adm. Code and a review of pollution control alternatives under s. NR 207.04(d), Wis. Adm. Code is not needed.

The antibacksliding requirement in s. NR 207.12(2)(d), Wis. Adm. Code is met because the permittee has no control and no reasonably available remedy. The general requirement of s. NR 207.12(1)(b), Wis. Adm. Code is met when relaxing the best professional judgement (BPJ) limitation of 325 mg/L to a limit that complies with the state water quality standard of 400 mg/L.

THERMAL - Requirements for Temperature are included in NR 102 Subchapter II Water Quality Standards for Temperature and NR 106 Subchapter V Effluent Limitations for Temperature. Thermal discharges must meet the Public Health criterion of 120 degrees F and the Fish & Aquatic Life criteria which are established to protect aquatic communities from lethal and sub-lethal thermal effects. Based on the available discharge temperature data from February 2008 to November 2008 the maximum daily effluent temperature reported was 69°F; therefore, no reasonable potential for exceeding the daily maximum limit exists, and no limits or monitoring are recommended.

WHOLE EFFLUENT TOXICITY – Whole effluent toxicity (WET) testing requirements and limits (if applicable) are determined in accordance with ss. NR 106.08 and NR 106.09 Wis. Adm. Code, as revised October 2019. Guidance in

Chapter 1.11 of the WET Guidance Document (WET Testing of Minor Municipal Discharges) was consulted. This is a minor municipal discharge (< 1.0 MGD) comprised solely of domestic wastewater, with no history of WET failures and no toxic compounds detected at levels of concern. Therefore, no WET testing is recommended because of the low risk in effluent toxicity.

3 Land Application - Proposed Monitoring and Limitations

Municipal Sludge Description						
Sample Point	**Sludge Class (A or B)**	**Sludge Type (Liquid or Cake)**	**Pathogen Reduction Method**	**Vector Attraction Method**	**Reuse Option**	**Amount Reused/Disposed (Dry Tons/Year)**
002	B	Liquid	N/A	N/A	WCWBF	62.5
Does sludge management demonstrate compliance? Yes						
Is additional sludge storage required? No						
Is Radium-226 present in the water supply at a level greater than 2 pCi/liter? No						
Is a priority pollutant scan required? No						

Sample Point Number: 002- LIQUID SLUDGE

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Annual	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Annual	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Annual	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Annual	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Annual	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Annual	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Annual	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Annual	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Annual	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Annual	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Annual	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Annual	Composite	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Selenium Dry Wt	Ceiling	100 mg/kg	Annual	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Annual	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Annual	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Annual	Composite	

Changes from Previous Permit:

No changes

Explanation of Limits and Monitoring Requirements

Requirements for land application of municipal sludge are determined in accordance with ch. NR 204 Wis. Adm. Code. Ceiling and high quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements. Limitations for PCBs are addressed in s. NR 204.07(3)(k).

4 Compliance Schedules

4.1 Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L)

This compliance schedule requires the permittee to achieve compliance with the specified MDV interim effluent limit in accordance with s. 283.16(6), Wis. Stats., by the due date.

Required Action	Due Date
Report on Effluent Discharges: Submit a report on effluent discharges of phosphorus with conclusions regarding compliance.	09/30/2022
Action Plan: Submit an action plan for complying with the specified interim effluent limit. If construction is required, include plans and specifications with the submittal.	03/31/2023
Initiate Actions: Initiate actions identified in the plan.	10/01/2023
Complete Actions: Complete actions identified in the plan and achieve compliance with the specified interim effluent limit. The monthly average interim MDV limit of 0.8 mg/L becomes effective 04/01/2024.	03/31/2024

4.2 Phosphorus Schedule - Continued Optimization

The permittee is required to optimize performance to control phosphorus discharges per the following schedule.

Required Action	Due Date
Optimization: The permittee shall continue to implement the optimization plan as previously approved to optimize performance to control phosphorus discharges. Submit a progress report on optimizing removal of phosphorus by the Due Date.	03/31/2023

Progress Report #2: Submit a progress report on optimizing removal of phosphorus.	03/31/2024
Progress Report #3: Submit a progress report on optimizing removal of phosphorus.	03/31/2025
Progress Report #4: Submit a progress report on optimizing removal of phosphorus.	03/31/2026

4.3 Phosphorus Watershed Project Requirements

The permittee is required to submit annual watershed project reports in accordance with the schedule below.

Required Action	Due Date
Annual Watershed Report: The permittee shall submit an annual report each year that documents the following: 1) The calculated monthly discharge of phosphorus in lbs/month and the calculated monthly target value in lbs/month for the previous calendar year. See the calculation steps in the Surface Water section of this permit. 2) The calculated Annual Offset to be generated by the approved Watershed Plan for the previous calendar year. See the calculation steps in the Surface Water section of this permit. 3) Verification that Watershed Plan # MDV-2021-0001 was implemented as approved and practices are operated and maintained consistent with the approved plan. 4) The pounds of phosphorus reduction achieved through the approved Watershed Plan for the previous calendar year. 5) The source of the phosphorus reductions with a reference to the approved Watershed Plan used to generate the offset. 6) Identification of any non-compliance or failure to implement the approved Watershed Plan. The first report is due by June 30, 2022 and subsequent reports are due on May 1 of each year.	06/30/2022
Annual Watershed Report #2: Submit an annual report (as described above) by May 1, 2023.	05/01/2023
Annual Watershed Report #3: Submit an annual report (as described above) by May 1, 2024.	05/01/2024
Annual Watershed Report #4: Submit an annual report (as described above) by May 1, 2025.	05/01/2025
Annual Watershed Report #5: Submit an annual report (as described above) by May 1, 2026. In the event the permit is not reissued prior to expiration, report submittal shall continue after the permit expiration date (until the permit is reissued). For example, the next report would be due 05/01/2027.	05/01/2026

4.4 Chloride Source Reduction Measures (SRM) Annual Reports

The permittee shall submit Chloride SRM Annual Reports by the Due Date.

Required Action	Due Date
Annual Chloride SRM Report: The annual chloride source reduction measures annual report shall include the following information on chloride source reduction activities performed during the previous year:	09/30/2022

1) Indicate actions taken to identify sources of chloride to the treatment plant; 2) Include a description of actions taken to minimize chloride sources; 3) Include a description of actions taken to maintain source reduction efforts; and 4) Include an analysis of trends in weekly, monthly and annual average chloride concentration and total mass discharge of chloride based on chloride sampling and flow data. The first annual chloride SRM report is to be submitted by the Date Due.	
Annual Chloride SRM Progress Report #2: Submit an annual chloride source reduction measures progress report as described above.	09/30/2023
Annual Chloride SRM Progress Report #3: Submit an annual chloride source reduction measures progress report as described above.	09/30/2024
Annual Chloride SRM Progress Report #4: Submit an annual chloride source reduction measures progress report as described above.	09/30/2025
Final Chloride SRM Report: Submit a final chloride SRM report documenting progress towards meeting the chloride limits. The report shall summarize chloride source reduction measures that have been implemented during the current permit term and state which, if any, source reduction measures were not pursued and why. The report shall include an analysis of trends in weekly, monthly and annual average chloride concentrations and total mass discharge of chloride based on chloride sampling and flow data covering the current permit term. Summarize any chloride monitoring conducted in the collection system. Additionally, the report shall include proposed source reduction measures for the next permit term.	09/30/2026
Annual Chloride SRM Reports After Permit Expiration: In the event that this permit is not reissued on time, the permittee shall continue to submit annual chloride SRM progress reports each year covering source reduction measures implemented and chloride concentration and mass discharge trends.	

4.5 Quarterly Waterway Inspection

Required Action	Due Date
Quarterly Waterway Inspection: The permittee shall inspect the effluent waterway once per quarter from point of discharge to 1,000 feet downstream. Document on an 8.5 x 11 inch map the location of the inspection and if/where sinkholes were observed thereby potentially allowing effluent to seep into groundwater. Mark locations of any swallets, sinkholes, fractured bedrock or similar features on the map. This quarterly inspection report/map shall be completed by within 30 days of the inspection, or by the 21st day of the month after the close of the quarter (whichever is sooner) and made available to the department upon request.	
Waterway Maintenance: If swallets, sinkholes or fractured bedrock are observed during the waterway inspection or at other times, the permittee shall report presence of swallets or sinkholes to	

the Department within 24 hours. Permittee shall implement a temporary remedy as soon as possible but not later than seven days from discovery of the problem. The permittee shall implement a permanent remedy within 60 days of discovery.	

Explanation of Compliance Schedules

- **Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L**): While 283.16(6) 1 requires an achievement of 0.8 mg/l in the first permit term (5 years), it is recommended that the permittee achieve the effluent limit of 0.8 mg/l within 2 years of the issued permit. The 2 – year term has been chosen because most of the year Ellsworth WWTF (Ellsworth) can go lower than the 0.8 mg/l, and with some adjustment in the winter they should be able to meet 0.8 mg/l in 2 years.
- **Phosphorus Schedule - Continued Optimization**: Per s. 283.16(6)(a), Wis. Stats. the Department may include a requirement that the permittee optimize the performance of a point source in controlling phosphorus discharges, which may be necessary to achieve compliance with multi-discharger variance interim limits. This compliance schedule requires the permittee to continue to implement the optimization plan that was approved during the previous permit term.
- **Phosphorus Watershed Project Requirements**: Subsection 283.16(6)(b), Wis. Stats., requires permittees that have received approval for the multi-discharger variance (MDV) to implement a watershed project that is designed to reduce non-point sources of phosphorus within the HUC 8 watershed in which the permittee is located. The permittee has selected the "Watershed Project" watershed option described in s. 283.16(8m), Wis. Stats. Under this option the permittee shall implement a plan that is designed to result in annual reductions from other sources in the basin based on the pounds of phosphorus discharged during the previous year in excess of the specified target value. This schedule requires the permittee to submit annual reports to the Department indicating adherence to the approved watershed plan.
- **Chloride Source Reduction Measures (SRM) Annual Reports**: The POTW tends to exceed chloride limits in some of the winter months. An addition of this requirement could help the POTW to continue to eliminate and reduce sources of chloride in the community. For example, there is a potential practice being conducted by an entity in the community, where wastewater with chloride is directly being discharged into the POTW's sewer system. The POTW should consider addressing this situation as one of the measures to reduce chloride in the system and track the results of their endeavors in an annual report.
- **Explanation of Quarterly Waterway Inspection, Waterway Follow-up Repair and Reporting**: Because the permittee discharges the treated effluent to an area known to develop sinkholes, this schedule requires them to inspect and maintain the waterway to prevent the direct discharge of effluent to groundwater through potential sinkholes that may form.

Special Reporting Requirements:

None

Other Comments:

Publishing newspaper: Pierce County Journal, P.O. Box 4, Prescott, WI 54021

Attachments:

- NR 140 Groundwater Evaluation Report: See memo from Woody Myers dated September 22, 2021 titled "Ellsworth Wastewater Treatment Facility – Groundwater Evaluation Report, WPDES Permit WI-0021253".
- Water Quality-Based Effluent Limitations for the Ellsworth Wastewater Treatment Facility WPDES Permit No. WI-0021253, dated October 22, 2021
- Substantial Compliance Determination, dated 09/15/2021 completed by Adebowale Adesanwo (in SWAMP)
- The "Phosphorus Multi-discharger Variance Application for Municipal Facilities" submitted by the permittee, dated 12/31/2020.
- The 06/02/2021 "Multi-discharger Variance Evaluation Checklist" completed by the department
- The 12/03/2021 letter from the DNR granting "Conditional Approval of the Multi-discharger Phosphorus Variance"
- The May 2021 "MDV Watershed Plan, Ellsworth, WI", assigned the DNR tracking number MDV-2021-0001.

Expiration Date:

December 31, 2026

Note: The proposed permit term is shortened by 3 months in order to satisfy conditions of the EPA approved phosphorus multi-discharger variance, which is currently set to expire on February 7, 2027.

Justification Of Any Waivers From Permit Application Requirements

N/A

Prepared By: Holly Heldstab, Wastewater Specialist

Date: February 4, 2022

cc: SWAMP